



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

BULLETIN
OF THE
TORREY BOTANICAL CLUB.

Vol. 24.

Lancaster, Pa., July 29, 1897.

No. 7.

A new fossil Monocotyledon from the Yellow Gravel at
Bridgeton, N. J.*

BY ARTHUR HOLLICK.

(PLATES 311-313.)

ANOMALOPHYLLITES BRIDGETONENSIS n. sp.

Leaf remains consisting of linear, or sub-linear, or broad, parallel-margined fragments, varying from two and one-half inches to three-fourths inch in width; the broader fragments gently wavy longitudinally and occasionally with a narrow, flattened area, parallel with one of the margins; the narrower fragments often longitudinally plicated or folded. Median nerves generally well defined in the broader fragments, less so, or absent in the narrower ones, occasionally with a well-defined parallel nerve on each side, or buried between the central folds. Surface smooth or obscurely striated longitudinally. Petioles two inches or more in width, rounded (semicircular?) in outline, finely striate longitudinally.

Formation and locality: Tertiary (Miocene?), Bridgeton, N. J.

The fragments figured on the accompanying plates have been selected from a large number collected, which undoubtedly represent the remains of a monocotyledon, almost certainly belonging to the palms.

The first specimens, found many years ago, were of medium size

* Other references to the locality or to the fossil may be found in the following contributions:

1. Palaeobotany of the Yellow Gravel at Bridgeton, N. J. Bull. Torrey Bot. Club, 19: 330. 1892.
2. New Species of Leguminous Pods from the Yellow Gravel at Bridgeton, N. J. *I. c.*, 23: 46. 1896.
3. A New fossil Grass from Staten Island. *I. c.*, 24: 122. 1897.

and were thought by Dr. N. L. Britton to be portions of grass leaves, allied to or identical with *Zizania*.* Some of these are depicted in figs. 1, 2 and 3, plate 313.

A yet smaller fragment, represented by fig. 6, plate 311, was submitted to Prof. Leo Lesquereux, who identified it as "*Cyperites*, spec?" †

Material subsequently collected by the late Dr. J. I. Northrop, by the Geological Survey of New Jersey and by me personally indicates that the fragments are not parts of single blade-like leaves, but dismembered portions of palmate leaves, like those of a fan palm, connected toward the petiole and separated into free divisions toward the margin.

Basal portions I consider to be represented by figs. 2-5, pl. 313, which are narrow and strongly plicated or folded; median portions by figs. 1-4, pl. 312, and figs. 1, 6 and 7, pl. 313. In figures 1 and 6 of the latter plate the place of separation of the free divisions is indicated at the summits. Portions of the free divisions are apparently represented by figs. 1-3, pl. 311, and portions of the petioles by figs. 4 and 5, pl. 311. Leaves of *Ulmus plurinervia* Ung. and *Quercus Klipsteinii* Etts., included respectively in figs. 1 and 5, pl. 311, have no special significance, except as an indication of the accompanying vegetation, which, it is hoped, will be described in full at some future time. The almost total absence of surface striations I believe may be accounted for by the character of the medium in which the fragments are preserved—a rather coarse, friable sandstone.

Upon examining the literature of tertiary palaeobotany many fragments similar to ours may be found described and figured by Gaudin, Heer, Watelet and others, under the genera *Cyperites*, ‡ *Flabellaria*, § *Phoenicites*, || *Anomalophyllites*, ¶ etc.—the first one supposed to represent the sedges, the others palms.

* Proc. Am. Assn. Adv. Sci. 31: 359 (1882); Trans. N. Y. Acad. Sci. 4: 31 (1884-85).

† Proc. U. S. Natl. Mus. 10: 36 (1887). Museum no. 2314.

‡ *Cyperites Montalionis* Gaud. Mem. Gisem. Feuill. Foss. Toscane, 1: 29. pl. 11, fig. 7; *C. multinervosus* Heer, Fl. Tert. Helvet, 1: 76. pl. 28, fig. 6.

§ *Flabellaria* (indéterminés) Wat. Plant. Foss. Bass. Paris, 97. pl. 27, figs. 6, 7.

|| *Phoenicites eocenica*, l. c., 98. pl. 27, figs. 1-5.

¶ *Anomalophyllites tricarinatus*, l. c., 100. pl. 28, figs. 1-5; *A. dubius*, l. c. figs. 6-8.

As I consider the Bridgeton specimens to almost certainly belong in the latter family, but without any characters by which they can be identified positively with any living genus, I have thought it advisable to include them under *Anomalophyllites*, with a specific name to indicate the locality where they were found.

The abundance of these remains is evidence that the plant to which they belonged was an important element in the flora of the region and of that of the geological age in which they flourished, and considerably extends our knowledge of the geographical range of palms in the past.

Explanation of Plates.

PLATE 311.

Figs. 1-3.—*Anomalophyllites Bridgetonensis* Hollick. Fragments of free divisions; fig. 1 including leaf of *Ulmus plurinervia* Ung.

Figs. 4 and 5.—Fragments of petioles; fig. 5 including leaf of *Quercus Klipsteinii* Etts.

Fig. 6.—Fragment of a free division. ("Cyperites, spec?" Lesq.)

PLATE 312.

Figs. 1-4.—*Anomalophyllites Bridgetonensis* Hollick. Fragments of median portion of leaf.

PLATE 313.

Figs. 1, 6 and 7.—*Anomalophyllites Bridgetonensis* Hollick. Fragments of median portion of leaf; figs. 1 and 6 showing indications of separation into free divisions at summits.

Figs. 2, 3-5.—Fragments of basal portion of leaf, showing folds.

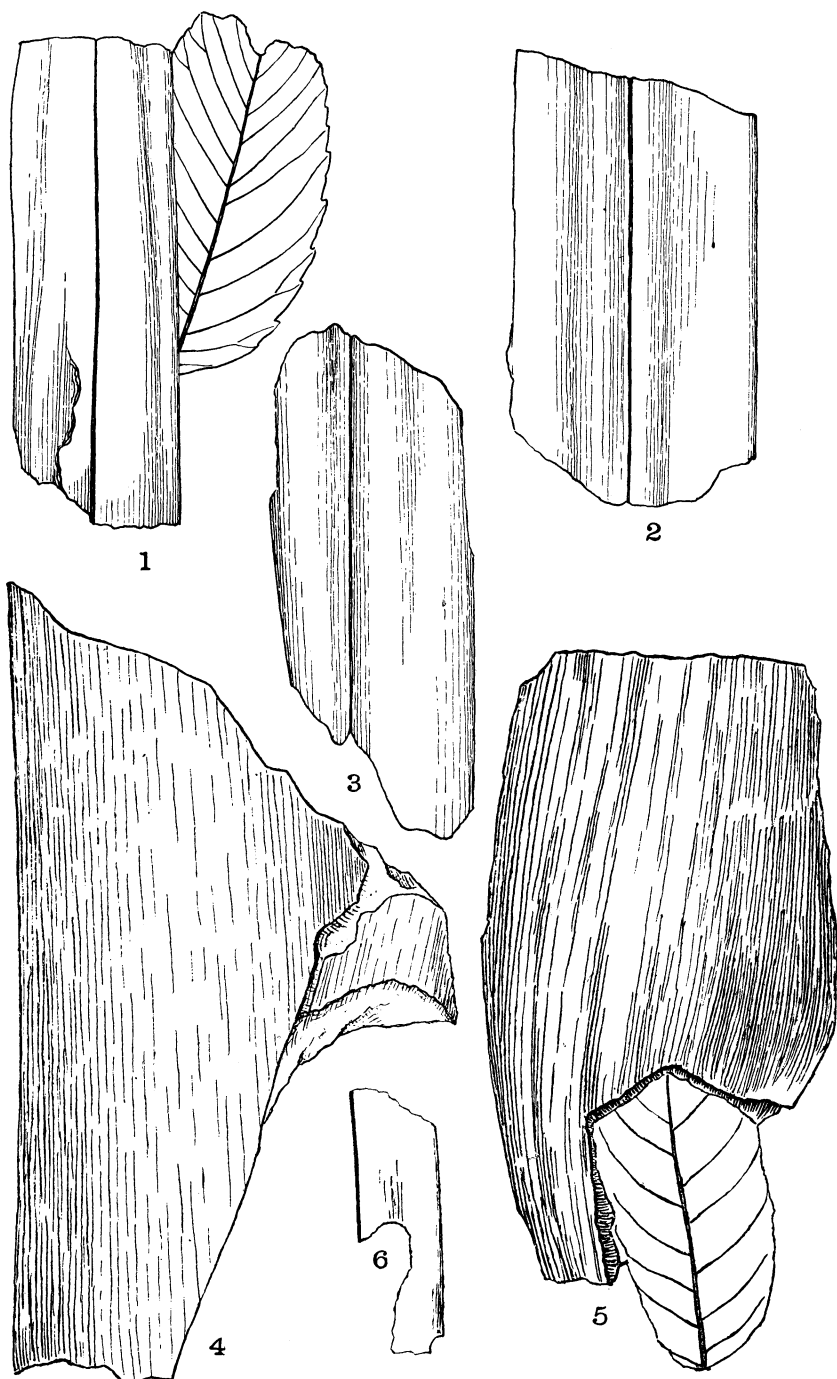
Studies in the Botany of the southeastern United States.—XI.

BY JOHN K. SMALL.

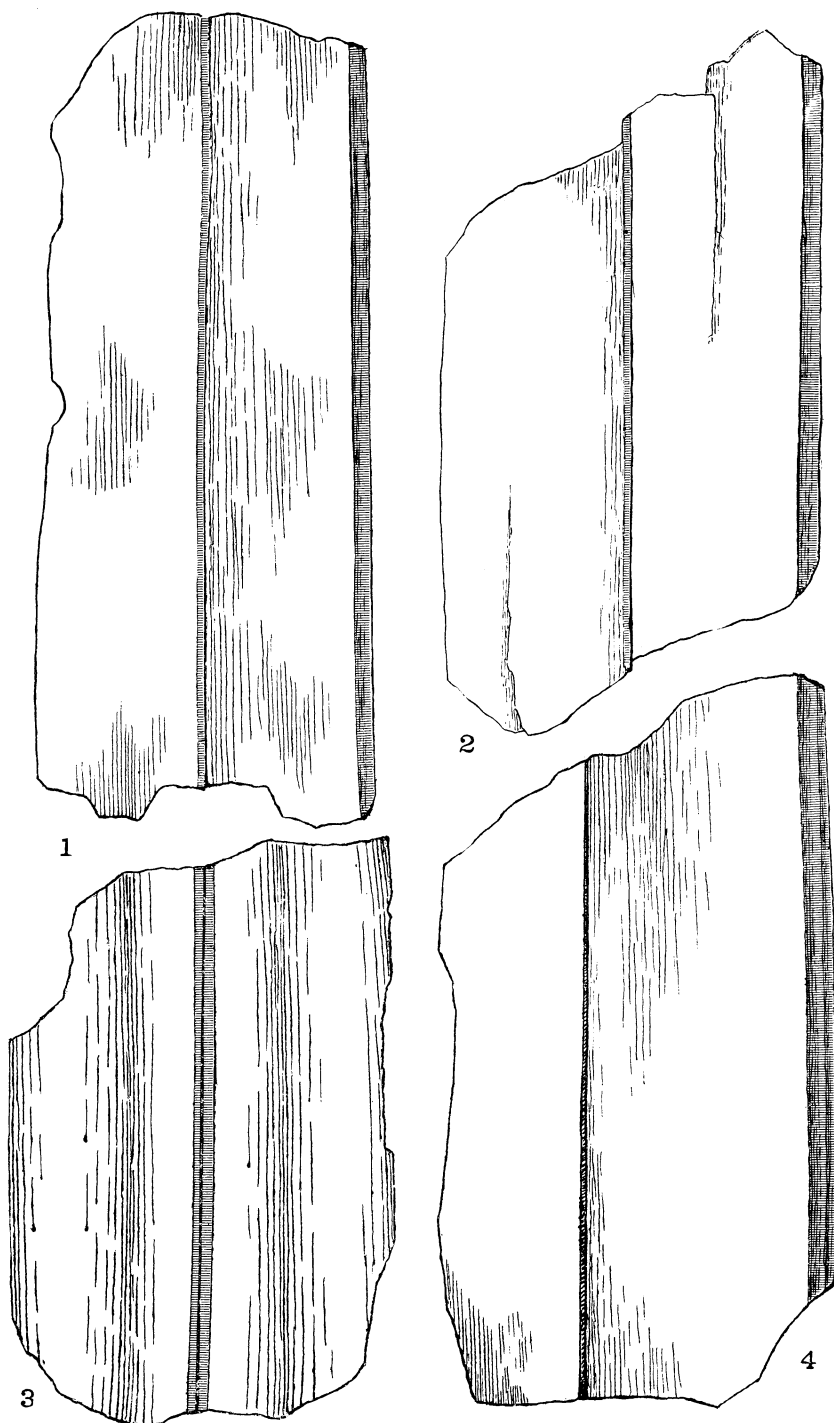
I. NOTEWORTHY SPECIES.

SAGITTARIA FILIFORMIS J. G. Smith, Rep. Mo. Bot. Gard. 6: 46.
pl. 15. 1894.

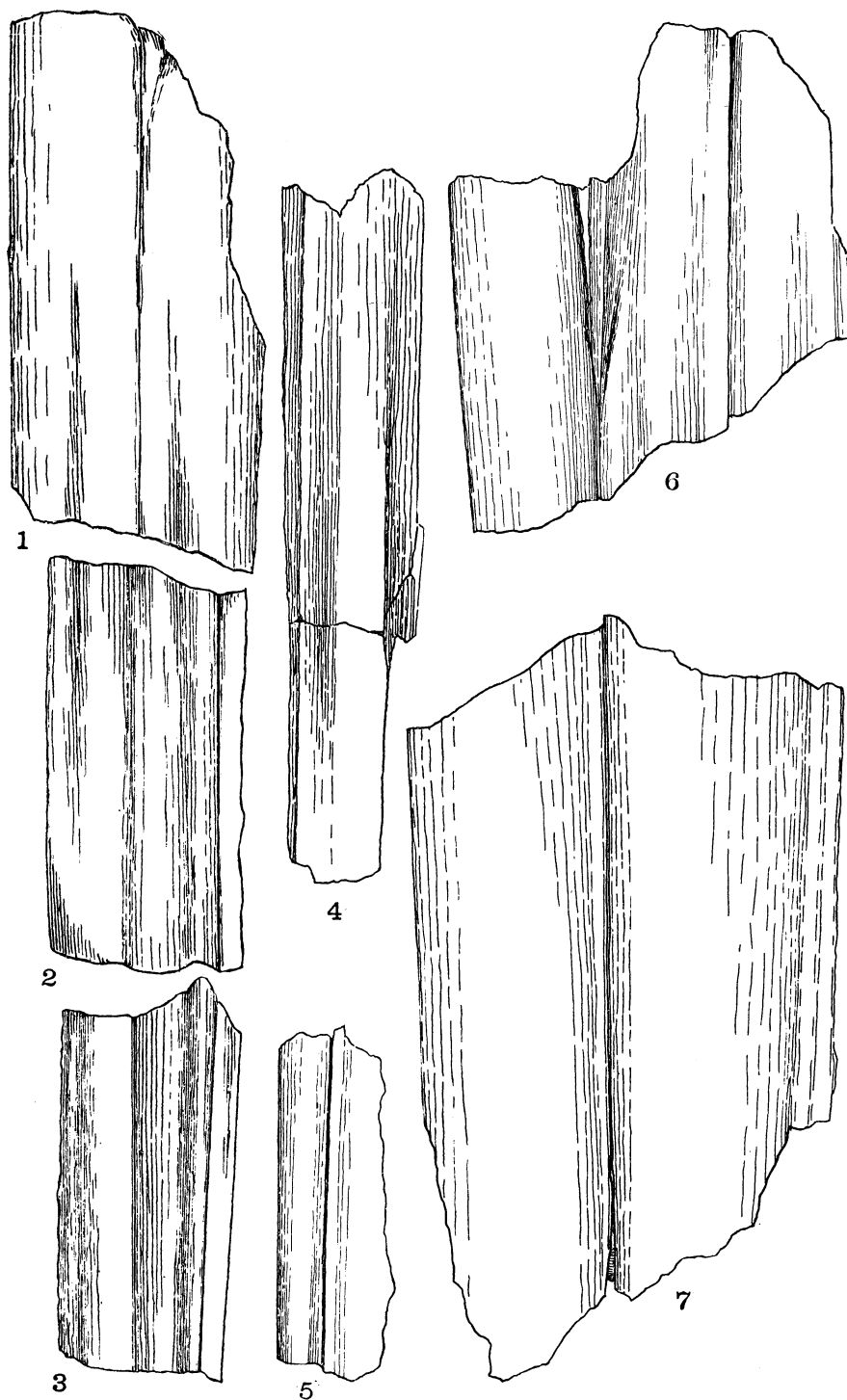
Mr. A. H. Curtiss has sent me fine fruiting specimens of this rare species, collected near Jacksonville, Florida. They are apparently the first specimens found with mature achenes; these are of the same general outline as the immature achenes figured by Mr. Smith, but slightly broader. In the center of each face there is an oblong swelling surrounded by a depression, while the edges



ANOMALOPHYLLITES BRIDGETONENSIS HOLLICK.



ANOMALOPHYLLITES BRIDGETONENSIS HOLLICK.



ANOMALOPHYLLITES BRIDGETONENSIS HOLLICK.